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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,055	06/06/2001	Yoko Iwamiya	208853US0	5631

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EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/874,055	IWAMIYA ET AL.5	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004 & 20 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-13 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 25, 2004 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bank et al, US 5,225,510. Bank et al (column 2, lines 37-43) discloses the use of a catalyst. Bank et al (column 2, lines 44 et seq) discloses the use of silanes, wherein the R groups are C₁₋₄ alkyls. Bank et al (column 4, lines 3-52) discloses the formation of dimers, trimers and tetramers corresponding to the C₁₋₄ alkyl/alkoxy substituted silanes. Bank et al further discloses the specific examples of treated materials include fiberglass and natural fibers among others. The alcohol pretreatment has not been shown to impart a patentable distinction to the coated material.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 5 and 11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bank et al, US 5,225,510. Bank et al discloses treating fibers with compositions containing partial hydrolysates of silanes as dimmers, trimers and tetramers as set forth in the above anticipation rejection.

Bank et al differs from the claims in the exemplified combination of a phenyl substituted trialkoxysilane (formula 2).

Bank et al (column 2, lines 55 and 56) teaches the use of phenyl trimethoxysilane and phenylethyltrimethoxysilane.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ a combination of two materials taught to be employed for the same function. It is generally prima facie obvious to use in combination two or more ingredients that have previously been used separately for the same purpose in order to form a third composition useful for that same purpose. *In re Kerkhoven*, 626 F.2d 846, 205 USPQ 1069 (CCPA 1980); *In re Pinten*, 459 F.2d 1053, 173 USPQ 801 (CCPA 1972); *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971); *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960). As stated in *Kerkhoven* and *Crockett*, the idea of combining them flows logically from their having been individually taught in the prior art.

Bank et al differs from claim 2 in that the surface is formed on said fibers that have been previously dipped in alcohol, dried and irradiated with ultraviolet light. Said steps are product by process steps, which have not been shown to impart a patentable distinction to the coated materials.

Furthermore, applicants set forth in the paragraph bridging pages 17 and 18 that the fibers are treated with isopropyl alcohol and dried at temperatures of up to 100° C. Said alcohol would evaporate and would not be present in the final material and the irradiation does not distinguish said material.

7. Claims 1-4 and 8-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smith, US 3,962,500. Smith

discloses methods of imparting resilience and crease resistance to synthetic fibers by treating said fibers with compositions containing partial hydrolysates of silanes.

It is noted, the claims lack any recitation of concentrations.

Smith (column 1, lines 1-25) discloses treating fibers with silane and partially hydrolyzed silane containing compositions to impart a number of properties including water repellency and lubricity. Smith (column 3, lines 3-27) component (C) as a silane and further discloses the use of partial hydrolysates of said compounds. Smith (lines 22-27) further discloses that partial hydrolysates includes condensates of said partial hydrolysates.

Smith (column 3, lines 35-50) discloses the incorporation of catalyst and other metal organic compounds.

When "b" is one, the compounds of formula denoted as reference formula (C) reads on the instantly claimed formula 2. See column 3, line 19, wherein phenyltriethoxysilane is set forth. When the compounds (column 3, lines 3-18) are partially hydrolyzed, condensation is expected and set forth in the Smith reference. Since the components would be expected to be present in an equilibrium reaction mixture and no concentrations of the components are set forth in the instant claims, said equilibrium mixture would have been expected to have at least small amounts of the instantly claimed oligomers of formula 1 and the silanes and/or oligomers of instantly claimed formula 3.

To the extent Smith differs in the exemplified and/or explicit disclosure of the combination of compounds as set forth in the claims, it would have been obvious to one

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having ordinary skill in the art at the time of the invention to employ the partial hydrolysates and therefore also partial condensates of the compounds taught in the Smith references for their advantages of treating fibers to impart resilience and crease resistance to said fibers and to impart a number of properties including water repellency and lubricity.

The alcohol pretreatment has not been shown to impart a patentable distinction to the coated material.

8. Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, US 3,962,500. Smith discloses coated material as set forth in the above anticipations and/or obviousness rejection.

Smith differs from claim 2 in that the surface is formed on said fibers that have been previously dipped in alcohol, dried and irradiated with ultraviolet light. Said steps are product by process steps, which have not been shown to impart a patentable distinction to the coated materials.

Furthermore, applicants set forth in the paragraph bridging pages 17 and 18 that the fibers are treated with isopropyl alcohol and dried at temperatures of up to 100° C. Said alcohol would evaporate and would not be present in the final material and the irradiation does not distinguish said material.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ a solvent cleaning and drying prior to coating the fibers. Surface preparation, eg, cleaning is conventional practice in the coating art and would

have been obvious to one of ordinary skilled in the art at the time of applicants' invention.

Smith differs from claims 5-7 and 11-13, in an alkenyl or phenyl substituted trialkoxysilane.

Smith (column 3, lines 3-27) clearly contemplates the use of alkenyl or phenyl substituted silanes and partial hydrolysates thereof. Applicants claims provide for R_5O , R_6O , R_7O , R_9O and $R_{10}O$ to be siloxane bonds to an oligomer. Applicants do not define the size of said oligomer. Smith contemplates oligomers having a molecular weight of 750. The molecular weight of $HO-(Si(CH_3)_2-O)_{10}-H$ is ~798. Applicants set forth the oligomers of formula 1 have 10 repeating units. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ alkenyl or phenyl substituted silanes, partial hydrolysates, and mixtures thereof as obvious reaction mixtures for treating fibers taught in the Smith reference. The combination thereof would have been obvious for their advantages of treating fibers to impart resilience and crease resistance to said fibers and to impart a number of properties including water repellency and lubricity.

It is further noted that applicants do not exclude the component (B) of the Smith reference.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 and 13-15 of U.S. Patent No. 6,403,183 in view of Marwitz et al, US 3,671,485. Although the conflicting claims are not identical, they are not patentably distinct from each other because said claims differ in the substrate treated and the prior art recognizes the treatment of said substrates interchangeably for the food packaging art.

6,403,183 discloses and claims (claims) a transparent article comprising a cellophane substrate coated on at least one surface with the instantly claimed coating compositions. 6,403,183 differs in the substrate being coated.

Marwitz et al (column 1, lines 1 et seq) discloses silane based coatings for treating paper and films among other substrates for food packaging. Marwitz et al (column 4, lines 7-20) teaches a number of materials to be treated include paper, fibers, foil sheet, wood and organic plastics.

These references are combinable because they teach treatment of food packaging with silane based compositions and Marwitz et al is cited on the 6,403,183 as prior art. It would have been obvious to one of ordinary skilled in the art at the time of

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applicants' invention to employ the compositions of 6,403,183 for treatment of the fiber and paper food packaging as an prior art recognized substrate used in food packaging.

Response to Arguments

11. Applicant's arguments filed March 25, 2004 have been fully considered but they are not persuasive.

12. Applicants (page 14) assert the Smith reference adds the component (C) for cross-linking rather than as the main component. This has not been deemed persuasive since the claims do not make the argued distinction either by explicit limitation or implied. The asserted properties (page 14, bottom and Table 1) are not commensurate in scope with the claims.

13. Applicants (page 15) assert formula 1 is employed as the main component of at least 50 %. This is not set forth in the claims rejected over Smith.

14. The rejections based on the Smith reference are deemed proper and have been maintained as set forth above.

15. Applicants ask that the Obviousness Double Patenting rejection over US 6,403,183 be held in abeyance until an indication of allowable subject matter. It is noted that allowable subject matter can not be indicated for claims, which are rejected under Obviousness Double Patenting. To the extent applicant intend to distinguish the claims over the US 6,403,183 patent, said issues need to be addressed or a terminal disclaimer filed for an indication of allowable subject mater to be indicated.

Conclusion


16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM